

U.S.S.N. 10/688,418

REMARKS

Thorough examination and careful review of the application by the Examiner is noted and appreciated.

Claims 15-20 are pending in the application.

Claims 17-20 are withdrawn from consideration.

Claims 15 and 16 stand rejected.

Claim Rejections Under 35 USC §102(b)

Claims 15 and 16 are rejected under 35 USC §102(b) as being anticipated by Rostoker '580. It is contended that Rostoker shows in Fig. 7d a multiplicity of contacts 750 that are similar to that claimed in the present invention Claim 15.

The rejection of claims 15 and 16 under 35 USC §102(b) based on Rostoker is respectfully traversed.

The present invention, as narrowly recited in Independent Claim 15 recites an IC chip having substantially **flattened** solder bumps on an active surface comprising:

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"... a **multiplicity** of solder bumps formed in **flattened hemi-spherical** shape on said multiplicity of bond pads, each of said multiplicity of solder bumps having a **height less than $\frac{1}{2}$ of the maximum diameter** of said hemi-spherical shapes".

The Applicants respectfully submit that not only Rostoker does not teach a multiplicity of solder bumps that have a height less than $\frac{1}{2}$ of the maximum diameter, and more importantly, Rostoker does not teach that the multiplicity of solder bumps are formed in **flattened hemi-spherical shape**. Throughout the Rostoker document, there is no such teaching and no such showing in any figures of a flattened hemispherical shaped solder bump.

Moreover, Claim 15 recites a structure of an IC chip that has:

"a **multiplicity** of **bond pads** formed on said **active surface**, and a **multiplicity** of solder bumps formed in flattened hemisphere spherical shape **on said multiplicity of bond pads**, each of said multiplicity of solder bumps having a height less than $\frac{1}{2}$ of the maximum diameter of said hemi-spherical shapes".

The Applicants respectfully submit that the solder bump of Rostoker is not formed on an active surface of an IC chip. Secondly, Rostoker does not show a multiplicity of bond pads that are formed on an active surface of an IC chip. Thirdly, Rostoker does not show a multiplicity of solder bumps formed on the multiplicity of bond pads.

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Rostoker, at col. 12, lines 13-33 merely discloses:

"Fig. 7d is a cross-sectional view A-A' of an assembly 700d of a conventional convex conductive bump contact 750 on a substrate 760 resting on the conductive contact structure 720 (which is disposed on another substrate not shown)".

There is no mentioning of the fact that the solder bump is formed on a bond pad at all, there is no mentioning of a multiplicity of bond pads, there is no mentioning of an active surface of an IC chip on which the bond pads are formed, and there is no specific teaching that the solder bumps have a height less than $\frac{1}{2}$ of the maximum diameter of the hemi-spherical shape of the solder bump.

The Applicants respectfully submit that the present invention claims 15 and 16 are clearly not anticipated by Rostoker '580 since Rostoker '580 does not teach all the essential elements of the present invention, as recited in independent claim 15 and dependent claim 16.

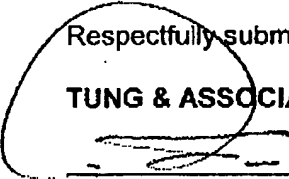
The rejection of claims 15 and 16 under 35 USC §102(b) based on Rostoker is respectfully traversed. A reconsideration for allowance of claims 15 and 16 is respectfully requested of the Examiner.

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Based on the foregoing, the Applicants respectfully submit that all of the pending claims, i.e. claims 15 and 16, are now in condition for allowance. Such favorable action by the Examiner at an early date is respectfully solicited.

Respectfully submitted,

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